

REMARKS

Claims 1-43 are pending in this application. Claims 25-43 have been withdrawn. Claims 1-24 remain for examination. Claims 1 and 20 have been rejected under 35 U.S.C. §102. Claims 1-24 have been rejected under 35 U.S.C. §103. Claim 1 has been amended. Claim 2 and Claim 9 have been cancelled without prejudice. No new matter has been added. Reexamination and reconsideration are respectfully requested.

Rejection Under 35 U.S.C. §102

The Examiner has rejected Claims 1 and 20 under 35 U.S.C. §102(a) as being anticipated by Witt et al. Applicant has amended Claim 1 so that it now contains features previously recited in Claims 2 and 9. No new matter has been added. Claims 2 and 9 have, therefore, been cancelled without prejudice.

As amended, Claim 1 now recites a method for formulating an enzyme comprising, *inter alia*, determining whether the colonies have peroxide resistant properties by incubating the colonies in peroxide. These features are not disclosed or suggested in Witt et al.

Witt et al is a paper discussing the effects of mutation of a glucose oxidase enzyme from *Penicillium amagasakiense*. In Witt et al, gene mutagenesis, expression and purification is performed on GOX derivatives. However, there is no disclosure or suggestion in Witt et al of producing a glucose oxidase gene having peroxide resistant properties. In particular, there is no disclosure or suggestion in Witt et al of determining whether colonies have peroxide resistant properties by incubating the colonies in peroxide as claimed by Applicant in amended Claim 1.

Accordingly, Claim 1, as amended, and Claim 20, which depends directly from Claim 1, is not anticipated by Witt et al.

Rejection Under 35 U.S.C. §103

The Examiner has rejected Claims 1-24 under 35 U.S.C. §103(a) as being unpatentable over Wohlfahrt et al in view of Shtelzer et al and Bylina et al. As stated previously, Applicant has amended Claim 1 and no new matter has been added. As

amended, Claim 1 now recites, *inter alia*, determining whether the colonies have peroxide resistant properties by incubating the colonies in peroxide. These features are not disclosed or suggested, individually or in combination, in Wohlfahrt et al, Shtelzer et al or Bylina et al.

Wohlfahrt et al is directed toward using certain structures of the glucose oxidase enzyme as a basis for modeling substrate complexes. As acknowledged by the Examiner, Wohlfahrt does not disclose or suggest a method of making mutant glucose oxidase. Among other things, Wohlfahrt et al does not disclose or suggest determining whether the colonies have peroxide resistant properties by incubating the colonies in peroxide as claimed by Applicant. There is no discussion of this feature in Wohlfahrt et al.

Shtelzer et al is directed toward an optical biosensor based upon glucose oxidase immobilized in sol-gel silicate matrix. In Shtelzer et al, the glucose oxidase enzyme is stabilized by simply entrapping the enzyme in a forming silicate gel. (Shtelzer et al, page 300). The Examiner asserts that Shtelzer et al teaches that glucose oxidases are susceptible to peroxide dependent inactivation and that peroxide instability is one problem in using the glucose oxidase enzyme in a biosensor. However, Shtelzer et al offers no method by which to counter this instability except by immobilizing the enzyme in a gel. In particular, Shtelzer et al does not disclose or suggest determining whether colonies have peroxide resistant properties by incubating the colonies in peroxide as claimed by Applicant.

Bylina et al is directed toward an instrument and method for screening microcolonies of cells expressing mutated enzymes. In Bylina et al, microcolonies are screened for desired properties after genes in the microcolonies have been mutated by a variety of methods. However, Bylina et al does not disclose or suggest mutating a gene into a gene that is peroxide resistant. Bylina does not discuss peroxide at all, and does not disclose or suggest incubating directly in peroxide a gene for which a desired property is being peroxide-resistant.

Accordingly, the are features of Claim 1 that are not disclosed or suggested, individually or in combination, in either Wohlfahrt et al, Shtelzer et al or Bylina. Thus, the combination of these references cannot disclose or suggest all of the features of amended Claim 1. Accordingly, Applicant respectfully submits that a *prima*

facie case of obviousness has not been made. Claim 1, and Claims 3-8 and 10-24, which depend either directly or indirectly from Claim 1, are, therefore, allowable over the references cited by the Examiner.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-0872. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-0872. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-0872.

Respectfully submitted,

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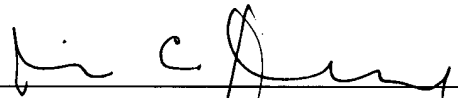


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